



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,682	05/21/2001	Edgar N. Rudisill	SS3161USNA	4206

23906 7590 01/17/2003

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 01/17/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,682

Applicant(s)

RUDISILL ET AL.

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether one distribution manifold is intended to form multiple "planar" flow streams or has a single planar one within itself. "Distribute" means to divide among several. Therefore one flow stream cannot be "distributed" to one planar flow stream. It is suggested this be changed to —flattening— or —changing— etc.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills in view of Groten et al. and Buehning.

Hills discloses forming multi-layered filaments by extruding multiple polymers into separate molten streams, filtering the streams, distributing streams into multiple coat hanger distribution manifolds which for the streams into planar flow streams, and

Art Unit: 1733

feeding the streams into multiple spinnerets wherein the polymers are joined together within the spinneret. (Figures 1, 3, and 4) The reference does not disclose joining the polymers together outside the spinnerets. Groten et al. discloses that it is not possible with current technology to achieve complex cross-sections of polymers with clear outlines using coextrusion and that instead the polymers should be joined outside the spinneret. (Col. 1, ll. 53-57; Figure 10) It would have been obvious to one of ordinary skill in the art at the time the invention was made to join the polymers of Hills together outside the die so that the complex shape of the polymer filament formed would have a clear outline. (Col. 1, ll. 53-57) As can be seen in Hills, plate 15 is the only plate where the streams are joined together. It can be clearly seen by the ordinary artisan that with the removal of this plate, the only thing necessary for the streams to join outside the die would be to move the stream exits closer together by the addition of a plate such as that of Groten or the replacement of plate 14 with a plate like that of Groten.

Hills also does not disclose filtering the polymer after it passes through the coat hanger manifolds. Buehning discloses filtering after passing through a coat hanger manifold since the filter sheers the polymer reducing the viscosity. (Col. 5, ll. 33-37) It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the filter after the coat hanger manifold since this would allow the filter to sheer the polymer reducing the viscosity (Col. 5, ll. 33-37) and since placing the filter elsewhere in the apparatus is an obvious alternative to filtering at the beginning.

Although the reference does not specifically disclose extruders, one in the art would appreciate that molten polymer is produced by an extruder.

Art Unit: 1733

Regarding claims 2-4 and 6-10, the rejection is as set forth in the previous office action.

Response to Arguments

Applicant's arguments filed 11/14/02 have been fully considered but they are not persuasive.

Regarding applicant's argument that neither Hills nor Groten suggest how to modify Hills to form fibers which are joined outside the die, Hills clearly suggests using different plates 14 and 15 to form different shapes as the plates shown by Figure 1 cannot be used to make fibers of the shapes shown in Figures 39, 43, and 44. One in the art reading the reference as a whole would appreciate that different plates were used to form different fiber shapes. Groten shows a plate with the fiber holes adjacent each other will create fibers that bond outside the die. In Hills, plate 15 is the only plate where the streams are joined together. It can be clearly seen by the ordinary artisan that with the removal of this plate, the only thing necessary for the streams to join outside the die would be to move the stream exits closer together by the addition of a plate such as that of Groten or the replacement of plate 14 with a plate like that of Groten.

Regarding applicant's argument that there is no reasonable exception of success since there is no suggestion of how to modify Hills with Groten, Hills already modifies the final plates which determine the shape of the fiber. There is no indication that replacing these fiber shaping plate with the fiber shaping plate of Groten would alter the equipment such that fibers could not be spun.

Art Unit: 1733

Regarding applicant's argument that Hills is directed to microfibers and Groten discloses fibers ten times that size, Hills forms microfibers by extruding fibers 0.5-2.5 deniers and separating them. (Col. 18, ll. 14-15 and Figure 43; Col. 26, ll. 39-50) Clearly the fibers formed are within the same size range.

In response to applicant's argument that Buehning is nonanalogous art since it is directed to melt-blown fibers and not spun-bond fibers, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both types of fibers are formed from the same types of equipment, i.e. extruders, distribution manifolds, etc. The difference is when in the process air is directed against the fibers and how. This occurs after formation of the fibers and has nothing to do with the equipment upstream of the extrusion plates. These are therefore clearly in the same field of endeavor.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 1733

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is **(703)-305-1352**. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BJM

BJM
January 14, 2003

Michael W. Ball

Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700